

Title (en)
Tamper detection in electronic devices

Title (de)
Erkennung von unbefugter Manipulation in elektronischen Vorrichtungen

Title (fr)
Détection d'accès frauduleux dans des dispositifs électroniques

Publication
EP 1160647 B1 20071010 (EN)

Application
EP 01304585 A 20010524

Priority
US 58667800 A 20000601

Abstract (en)
[origin: EP1160647A2] A security system for electronic circuits (for example electronic circuits contained within a secure POS terminal (200)) is provided that is both more tamper resistant, and tamper responsive and less expensive than the prior art epoxy potting. This is achieved by inserting an electrical connector (310) between a first (260A) and a second (260B) circuit board contained within a case of the POS terminal (200). The first (260A) and the second (260B) circuit boards are any type of circuit board known in the art. If the case is opened the connector no longer provides an electrical connection between the first (260A) and the second (260B) circuit boards, triggering a tamper detection circuit (460). In some embodiments, a flexible conductive film (340) is wrapped around the circuit boards and the connector (310). If a tamperer attempts to penetrate the case of the POS terminal (200) to disable the tamper detection circuit, the circuit on the flexible security film (340) is interrupted, in turn triggering the tamper detection circuit (460). By eliminating the potting process the cost and complexity of manufacture are reduced. In addition, the circuitry within the terminal (200) can be accessed for repair and maintenance purposes. <IMAGE>

IPC 8 full level
G06F 1/00 (2006.01); **G06F 21/00** (2006.01); **G06F 21/06** (2006.01); **G07F 7/10** (2006.01)

CPC (source: EP US)
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Citation (examination)
US 6065679 A 20000523 - LEVIE STEPHEN ALAN [US], et al

Cited by
DE102008009936A1; EP2924606A1; EP1986123A1; RU2475762C1; NL1030421C2; EP1801723A3; EP1542180A1; GB2507954B; GB2411756A; GB2411756B; US11645427B2; US9760127B2; US10740499B2; US8432300B2; US11514419B2; US9418250B2; WO2013143725A1; WO2015049531A1; WO2009149715A1; WO2008077964A1; WO2014057237A1; US8874937B2; US7454629B2; US9990797B2; EP2932432A1; WO2010142748A1; JP2015053059A; WO2014167161A3; WO2008132145A1

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